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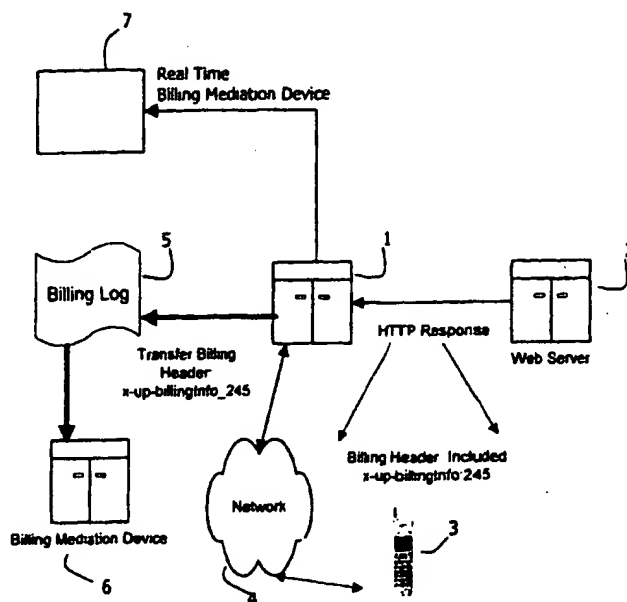
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[Continued on next page]

(54) Title: A NETWORK GATEWAY-BASED BILLING METHOD



(57) Abstract: A gateway (1) routes signals between a WAP mobile phone (3) and an application on a Web server (2). The application generates a message for each of a number of events recognised according to the service being provided. These messages are transmitted to the gateway (1). A billing manager in the gateway (1) directs the messages in real time to a real time mediation device (7) if they relate to a pre-pay service, or alternatively to a billing log (5) for off-line processing. The network operator operating the gateway can thus charge in a manner relating to services provided instead of simply call duration.

WO 01/58110 A3





patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,  
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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/IE 01/00016

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H04L29/06

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04L G06F H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 31610 A (BRITISH TELECOMM ; LEVERIDGE PHILIP CHARLES (GB)) 24 June 1999 (1999-06-24) abstract	1, 18
Y	page 7, line 23 - page 9, line 24 page 11, line 9 - page 12, line 5 page 2, line 2 - line 12 page 3, line 8 - page 5, line 18	2-17, 19-24
Y	US 5 873 030 A (PIMENTAL THELMA ET AL) 16 February 1999 (1999-02-16) abstract; figures 2C, 3A column 2, line 41 - column 3, line 9 column 5, line 9 - line 20 column 8, line 45 - column 10, line 9	2-17, 19-24
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☒ Patent family members are listed in annex.

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>US 5 794 221 A (EGENDORF ANDREW)  11 August 1998 (1998-08-11)  abstract; figures 2,3  column 2, line 9 - line 65  column 5, line 61 -column 6, line 51  ---</p>	1-24
A	<p>US 5 845 267 A (RONEN YZHAK)  1 December 1998 (1998-12-01)  abstract  column 2, line 41 -column 3, line 12  column 6, line 52 -column 7, line 43  ---</p>	1-24
A	<p>J. ALVINEN, J. LATHI, A. BOBOTEK ET AL.:  "WAP Push Architectural Overview"  WIRELESS APPLICATION FORUM,  8 November 1999 (1999-11-08), pages 1-26,  XP002172466  page 14, line 1 -page 15, line 11; figure  5  -----</p>	1-24



# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9931610	A	24-06-1999	AU 1570399 A CN 1282432 T EP 1040437 A	05-07-1999 31-01-2001 04-10-2000
US 5873030	A	16-02-1999	NONE	
US 5794221	A	11-08-1998	AU 726993 B AU 5986596 A CA 2226253 A EP 0845125 A JP 2000505568 T US 6188994 B WO 9703410 A	30-11-2000 10-02-1997 30-01-1997 03-06-1998 09-05-2000 13-02-2001 30-01-1997
US 5845267	A	01-12-1998	AU 3819197 A WO 9810382 A	26-03-1998 12-03-1998